

# 9. Substance Abuse

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The abuse of alcohol, use of illicit drugs, and commercial tobacco use are all linked to serious health conditions such as heart disease, cancer, and liver disease. The use of intoxicants also contributes significantly to the incidence of fatal motor vehicle crashes, homicides, suicides, and sexually transmitted diseases, and is associated with many of the country's most serious social problems, including child and spousal abuse, violence, injury, unwanted pregnancy, and homelessness.

According to national data on drug and alcohol use, AI/AN have the highest rates of substance dependence or abuse of all ethnic groups. Almost 15% of AI/AN report substance dependence or abuse, compared to 8.4% of whites.<sup>1</sup> AI/AN communities report high rates of alcohol, tobacco and marijuana use, and methamphetamine abuse has become a significant problem for Northwest tribes. The abuse of prescription medications has also been on the rise and is causing devastating consequences within AI/AN communities.

While over one-quarter of AI/AN in Washington reported no alcohol consumption in the past month, 46% of AI/AN men reported binge drinking. Compared to NHW, a larger percentage of AI/AN in Washington are current smokers. 22% of AI/AN men and 19% of AI/AN women reporting having a childhood experience of living with someone who used illicit drugs or abused prescription drugs. The consequences of substance abuse for AI/AN communities can be seen in hospitalization and mortality data from Washington. AI/AN have higher rates of alcohol and drug-related hospitalizations and deaths than NHW in the state. Drug and alcohol-associated deaths accounted for 31.3% of all deaths among Washington AI/AN from 2006-2010.

This section gives an overview of substance-related data for AI/AN in Washington State, including self-reported use, childhood experiences of substance use, and hospitalization and mortality rates due to alcohol and drug overdose.

1. Substance Abuse and Mental Health Services Administration, Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-48, HHS Publication No. (SMA) 14-4863. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014.

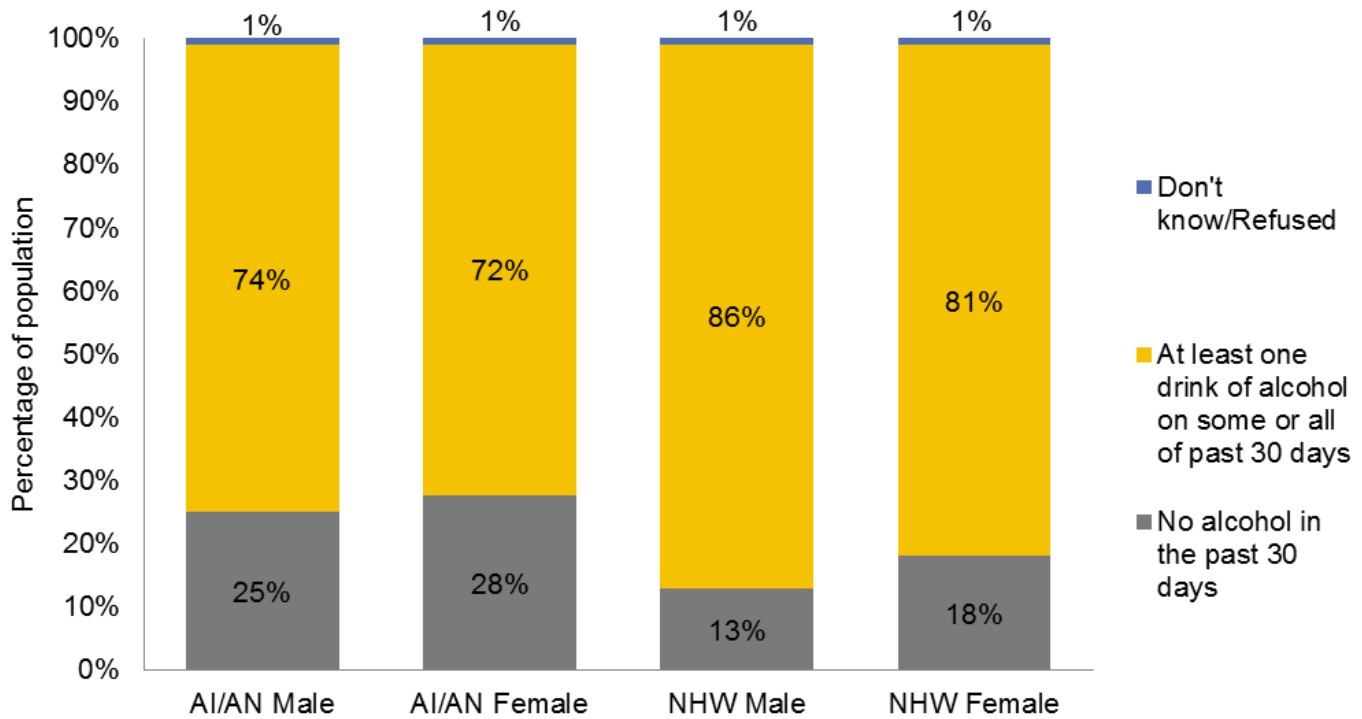
# Self-Reported Alcohol Consumption

From 2006-2012, 74% of AI/AN males and 72% of AI/AN females in Washington reported having at least one alcoholic drink in the past 30 days (Figure 9.1). Over 25% of AI/AN adults in the state reported no alcohol consumption in the past 30 days, compared to 13% of NHW males and 18% of NHW females.

**Data Source:** CDC Behavioral Risk Factor Surveillance System (BRFSS), 2006-2012.

**Data Notes:** The BRFSS prevalence estimates (shown as a percentage) are weighted to make the survey responses representative of the Washington population. The sample sizes presented below the figures are the unweighted number of people who answered this question for the indicated years.

**Figure 9.1: Prevalence of self-reported alcohol consumption by race and sex, Washington, 2006-2012.**



Sample sizes (n): AI/AN males=458; AI/AN females=577; NHW males=35,445; NHW females=48,198.

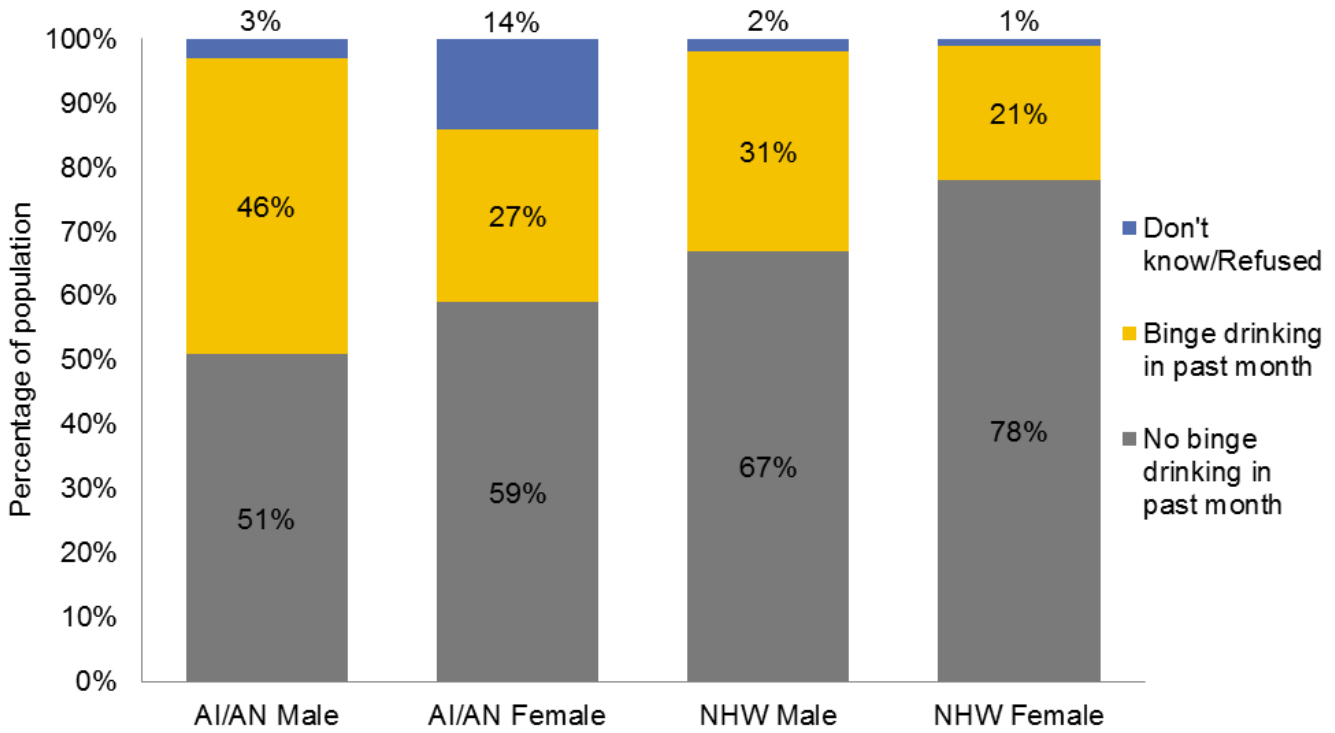
# Self-Reported Binge Drinking

Figure 9.2 shows the percentage of Washington AI/AN and NHW who reported binge drinking in the past month. From 2006-2012, 46% of AI/AN males reported binge drinking in the past month. This percentage was higher than NHW males in Washington (31%). AI/AN females were also more likely to binge drink than their NHW counterparts (27% vs. 21%). About 14% of AI/AN females either did not know or refused to answer this question.

**Data Source:** CDC Behavioral Risk Factor Surveillance System (BRFSS), 2006-2012.

**Data Notes:** The BRFSS prevalence estimates (shown as a percentage) are weighted to make the survey responses representative of the Washington population. The sample sizes presented below the figures are the unweighted number of people who answered this question for the indicated years.

**Figure 9.2: Prevalence of self-reported binge drinking by race and sex, Washington, 2006-2012.**



Sample sizes (n): AI/AN males=388; AI/AN females=473; NHW males=31,588; NHW females=41,083.

# Childhood Experience of Living with Someone who Used or Abused Drugs

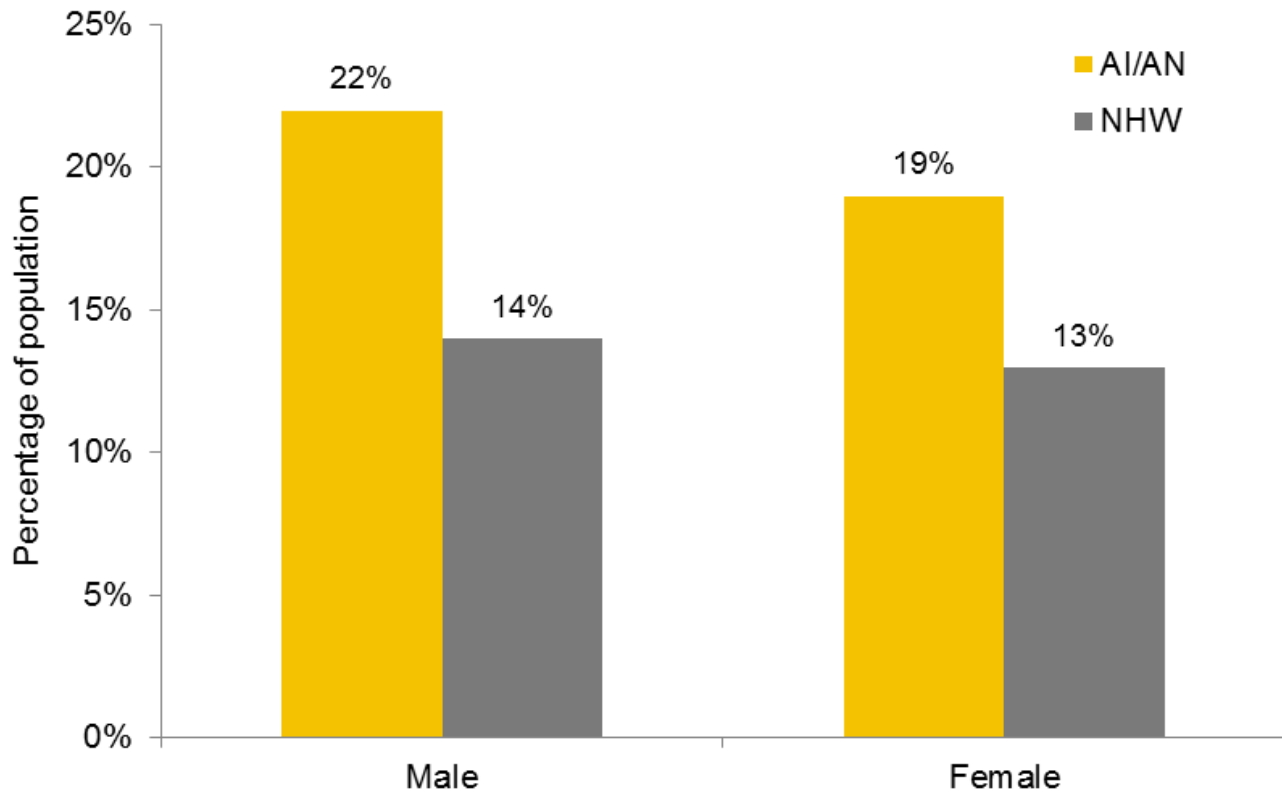
Figure 9.3 shows the percentage of Washington AI/AN and NHW with a childhood experience of living with someone who used illegal street drugs or abused prescription drugs. In 2011, 22% of AI/AN males reported being exposed to drug use/abuse as a child. This was higher than the percentage of AI/AN females who reported having this experience as a child (19%). Among NHW, 14% of males and 13% of females had childhood exposure to drug use/abuse.

**Data Source:** CDC Behavioral Risk Factor Surveillance System (BRFSS), 2011.

**Data Notes:** The BRFSS prevalence estimates (shown as a percentage) are weighted to make the survey responses representative of the Washington population. The sample sizes presented below the figures are the unweighted number of people who answered this question for the indicated years.



**Figure 9.3: Childhood exposure to an environment where drugs were used/abused, by race and sex, Washington, 2011.**



Sample sizes (n): AI/AN males=61; AI/AN females=99; NHW males=4,885; NHW females=7,418.

# Hospitalizations Related to Alcohol and Substance Abuse

In 2011, 0.5% of AI/AN hospitalizations had a principal diagnosis related to an alcohol or substance abuse disorder (Table 9.1). Compared to NHW, alcohol or substance abuse accounted for a larger proportion of hospitalizations among AI/AN, with the largest difference for males (0.8% vs. 0.3%). Compared to their NHW counterparts, the age-adjusted hospitalization rate for alcohol and substance abuse disorders was 3.8 times higher for AI/AN males and 2.6 times higher for AI/AN females (Figure 9.4). There is considerable uncertainty in these estimates, as demonstrated by the wide confidence intervals around the AI/AN rates.

**Data Source:** Washington state hospital discharge data (CHARS), 2011, corrected for misclassified AI/AN race by the IDEA-NW Project.

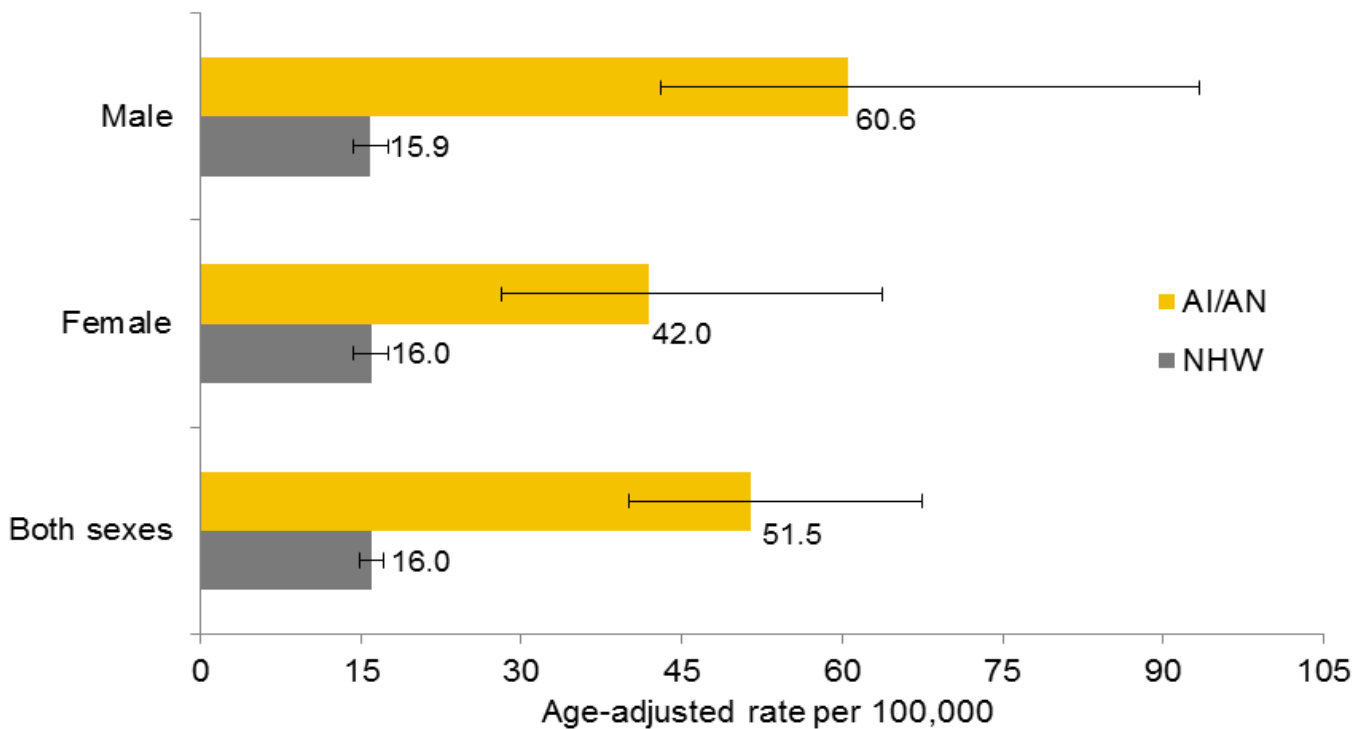
**Data Notes:** Principal diagnosis codes categorized using the Agency for Healthcare Research and Quality's Clinical Classification Software. The following level-2 principal diagnosis codes were included: 5.11 (alcohol-related disorders), and 5.12 (substance-related disorders).

**Table 9.1: Inpatient hospital discharges for alcohol and substance abuse disorders by race and sex, Washington, 2011.**

Sex	AI/AN N (%) <sup>†</sup>	NHW N (%) <sup>†</sup>
Male	44 (0.8%)	422 (0.3%)
Female	30 (0.3%)	448 (0.2%)
Both Sexes	74 (0.5%)	870 (0.2%)

<sup>†</sup>N = number of inpatient hospitalizations. The percentages were calculated using the total inpatient hospitalizations for each group: AI/AN male (5,731), AI/AN female (8,741), AI/AN total (14,472), NHW male (159,142), NHW female (212,276), NHW Total (371,418)

**Figure 9.4: Age-adjusted hospital discharge rates for alcohol and substance abuse disorders by race and sex, Washington, 2011.**



# Accidental Poisonings & Overdose Mortality

Accidental poisoning was the leading cause of AI/AN unintentional injury deaths in Washington from 2006-2010. The majority of accidental poisoning deaths were due to accidental drug and alcohol overdoses. Poisonings from substances such as gas and vapors, pesticides, household chemicals, and other noxious substances made up less than 2% of poisoning deaths in both AI/AN and NHW.

Table 9.2 and Figure 9.5 show the age-adjusted mortality rates for accidental poisoning among AI/AN and NHW in Washington. AI/AN males were about 30% more likely than females to suffer an accidental poisoning death. Compared to NHW, accidental poisoning mortality rates were 2.5 times higher for AI/AN in Washington. Washington AI/AN had higher rates of accidental poisoning deaths than AI/AN in Idaho and Oregon.

**Data Source:** Washington state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

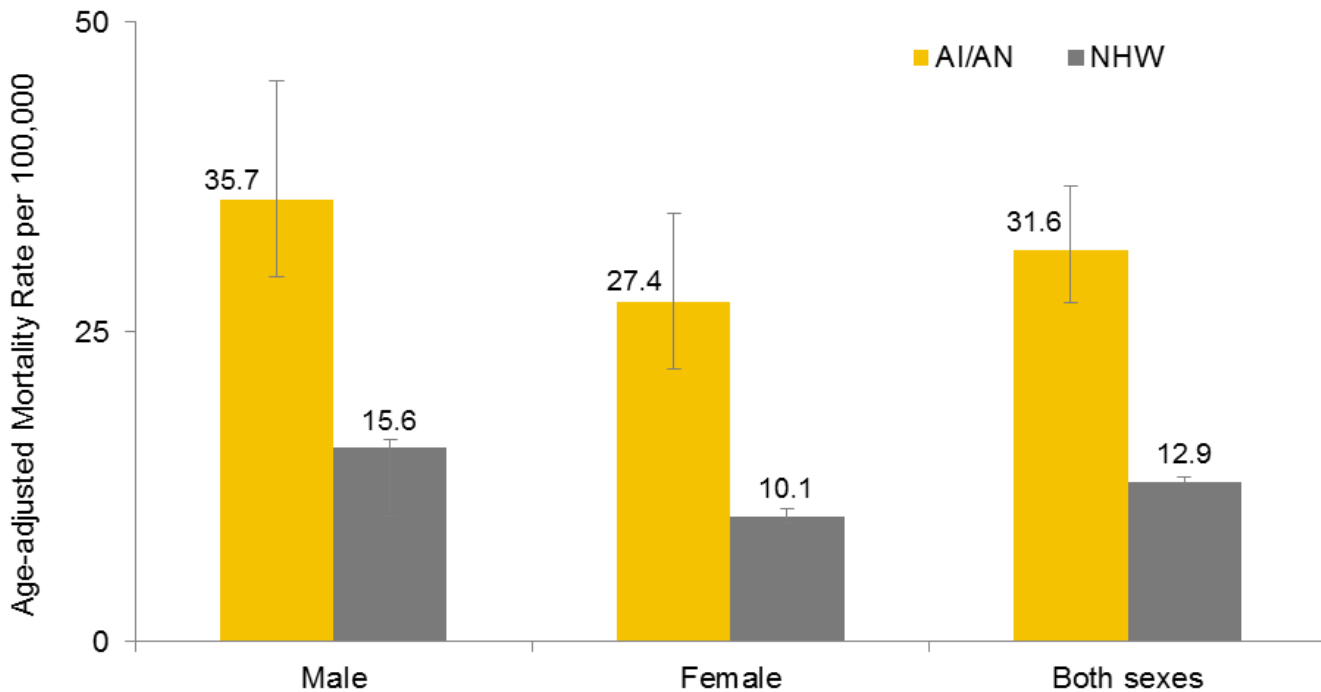
**Table 9.2: Age-adjusted accidental poisoning mortality rates by race and sex, Washington, 2006-2010.**

Sex	AI/AN Rate (95% CI)	NHW Rate (95% CI)	AI/AN vs. NHW Rate Ratio (95% CI)
Male	35.7 (29.5, 45.2)	15.6 (14.9, 16.3)	2.3 (1.9, 2.7) ‡
Female	27.4 (22.0, 34.6)	10.1 (9.5, 10.7)	2.7 (2.2, 3.4) ‡
Both Sexes	31.6 (27.4, 36.8)	12.9 (12.4, 13.3)	2.5 (2.1, 2.8) ‡

CI = confidence interval

‡ Indicates a statistically significant difference (p<.05).

**Figure 9.5: Age-adjusted accidental poisoning mortality rates by race and sex, Washington, 2006-2010.**

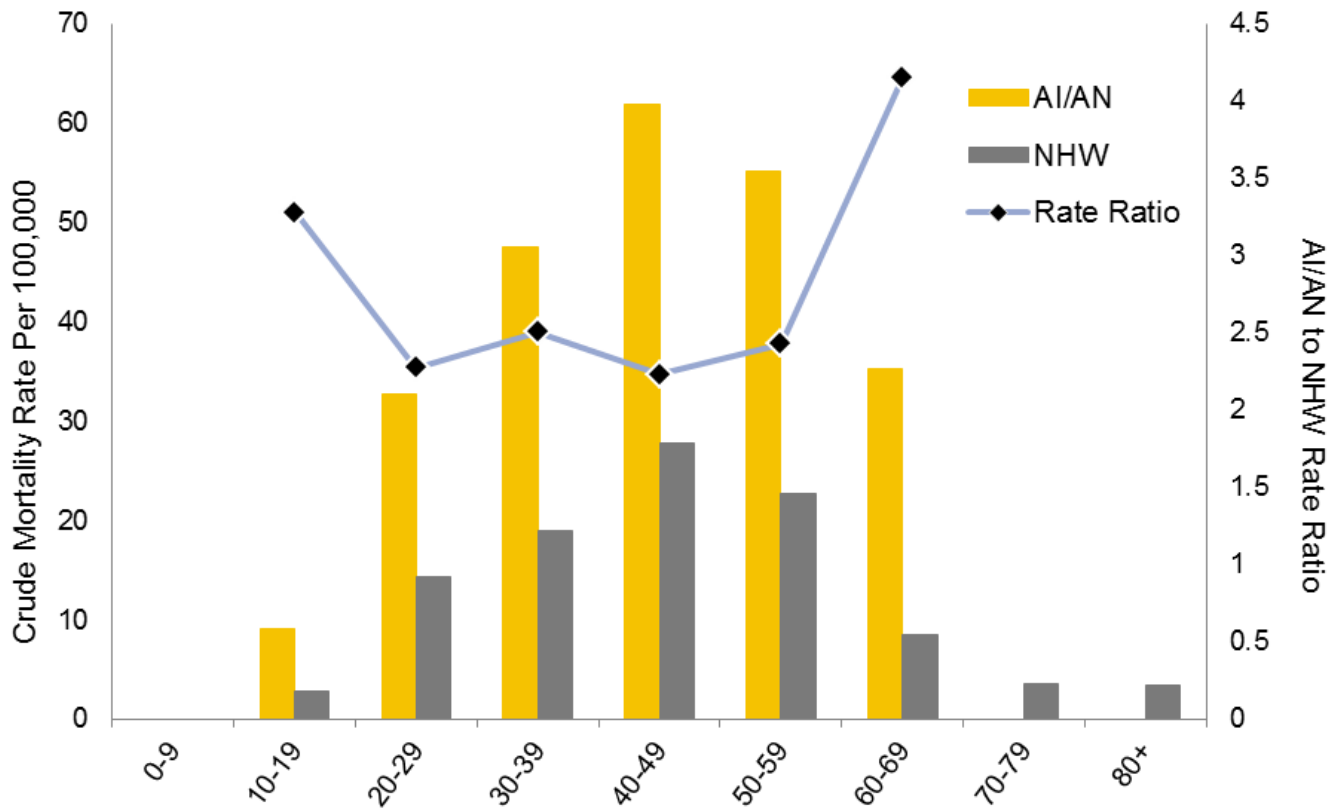


# Accidental Poisoning Mortality Across the Life Span

Figure 9.6 shows age-specific mortality rates by race for accidental poisonings in Washington. The columns show the age-specific mortality rates for AI/AN and NHW, and the line shows the rate ratio comparing the two populations. Middle aged AI/AN (30-59) had the highest rates of accidental poisoning deaths. However, the age groups with the highest disparity compared to NHW were children ages 10-19 and elders ages 60-69. AI/AN children were 3.3 times more likely to die from accidental poisoning. The disparity was even larger for AI/AN elders, with AI/AN 4.2 times more likely to die from accidental poisoning than NHW ages 60-69. The most common type of poisoning for both the younger and older groups was overdose by narcotics and hallucinogens.

**Data Source:** Washington state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

Figure 9.6: Age-specific accidental poisoning mortality rates by race, Washington, 2006-2010.



Note: Rate Ratio is a comparison of AI/AN to NHW rates; a value above 1 indicates AI/AN rates are higher than NHW. Black markers are shown for age groups in which the AI/AN rates are statistically significantly higher than NHW rates.

# Types of Drug & Alcohol Overdose Deaths

Table 9.3 summarizes the types of drug and alcohol overdose deaths seen among Washington AI/AN and NHW. These data include deaths where drugs or alcohol were a contributing cause or underlying cause of death. For example, a death with an underlying cause of motor vehicle crash may have had alcohol as a contributing factor - this would be included in the “alcohol associated deaths” category. Note that “drug associated” and “alcohol associated” include deaths from short term and long term substance use, but exclude drug deaths related to medical errors or allergic reactions.

Five percent of all AI/AN deaths in Washington had drug overdose as the underlying cause of death. Drug and alcohol associated deaths accounted for 31.3% of all deaths among Washington AI/AN from 2006-2010. These percentages were higher than the percentage of NHW deaths that had drugs or alcohol as an underlying or contributing cause of death.

Data Source: Washington state death certificates, 2006-2010, corrected for misclassified AI/AN by the IDEA-NW Project.

Data Notes: Note that columns do not add up due to multiple drugs contributing to a single death and cross-over in the definitions.



Table 9.3: Types of drug and alcohol overdose deaths by race, Washington, 2006-2010.

	AI/AN		NHW	
	N	% of all deaths	N	% of all deaths
<b>Drug OD deaths (underlying only)<sup>1</sup></b>	226	5.0%	4,040	1.9%
<b>Drug associated deaths<sup>2</sup></b>	249	5.5%	4,468	2.1%
Prescription drugs contributing <sup>3</sup>	175	3.9%	3,330	1.6%
Prescription OPR contributing <sup>4</sup>	134	2.9%	2,435	1.1%
Illicit drugs contributing <sup>5</sup>	91	2.0%	1,126	0.5%
<b>Alcohol associated deaths<sup>6</sup></b>	1,299	28.6%	46,016	21.6%
<b>Total drug &amp; alcohol associated</b>	1,424	31.3%	48,467	22.8%
<b>Total deaths</b>	4,543	100.0%	212,611	100.0%
<b>1</b>	Underlying COD X40--X44, X60--X64, X85, or Y10--Y14			
<b>2</b>	Underlying or Contributing COD X40--X44, X60--X64, X85, Y10--Y14, F11.0-F19.9, R78.1-R78.5, T36- T39, T40.1 -T40.9, T41.0-T43.9, T44.0-T50.9			
<b>3</b>	Contributing COD T36--T39, T40.2--T40.4, T41--T43.5, and T43.7--T50.8, any underlying COD			
<b>4</b>	Contributing COD T40.2--T40.4, any underlying COD			
<b>5</b>	Contributing COD T40.1, T40.5, T40.7--T40.9, and T43.6, any underlying COD			
<b>6</b>	Underlying or Contributing COD—F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, E24.4, Y15			

n = number, OD = Overdose, OPR = Opioid Pain Reliever, COD = Cause of Death

# Accidental Poisoning Mortality Trends

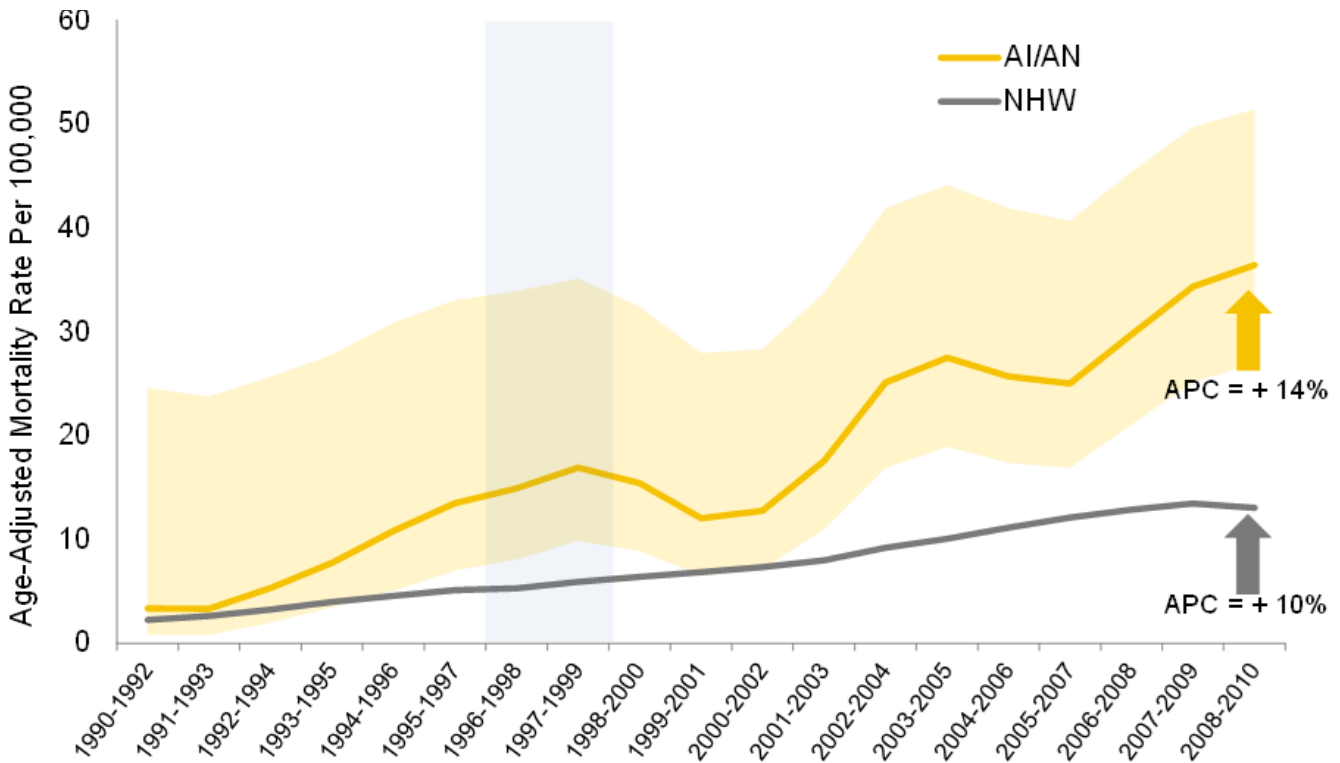
Figure 9.7 shows accidental poisoning mortality trends for the AI/AN and NHW population in Washington between 1990 and 2010. The yellow shaded section around the AI/AN line represents a 95% confidence interval band.

Although AI/AN and NHW accidental poisoning rates were similar at the beginning of the time period, AI/AN rates have remained consistently higher than NHW rates during the past decade. While both populations had significant increases in accidental poisoning rates, AI/AN rates increased more steeply at an average of 14% per year. As a result, the gap between the races has grown.

**Data Source:** Washington state death certificates, 2006-2010, corrected for misclassified AI/AN race by the IDEA-NW Project.

**Data Notes:** APC = Annual Percentage Change. Cause of death coding on death certificates underwent a change from ICD-9 to ICD-10 between 1998 and 1999. Data shown in the trend charts in this report have not been adjusted to reflect this change. Comparability ratios for the broad categories reported here show that the change did not have a large impact for these statistics, however any abrupt changes between 1998 and 1999 should be interpreted with caution.

**Figure 9.7: Age-adjusted accidental poisoning mortality rates, three year rolling averages, by race, Washington, 1990-2010.**



Note: The shaded rectangle indicates the year cause of death coding changed from ICD-9 to ICD-10. Any abrupt changes between 1998 and 1999 should be interpreted with caution.

## Program Spotlight: THRIVE

NPAIHB's THRIVE project (Tribal Health: Reaching Out InVolves Everyone) works with Northwest Tribes to prevent drug and alcohol abuse. In 2010 the project hosted meetings with regional partners to develop a 5-year strategic plan: the Northwest Tribal Substance Abuse Action Plan. The plan is now being used to guide program planning, catalyze community outreach efforts, and foster a coordinated response to substance abuse in our Northwest Tribes.



Acting upon one of the goals of the plan - to increase knowledge and awareness about substance abuse - the THRIVE project developed a national media campaign focusing on alcohol and drug prevention for AI/AN teens and young adults. The campaign, **Strengthen My Nation**, was funded by the Indian Health Service's Meth & Suicide Prevention Initiative, and was developed with feedback from hundreds of teens, parents, and health educators throughout the U.S. The campaign includes posters, brochures, fact sheets, and public service announcements for television and radio.

All of the campaign materials are available on the NPAIHB website:

[http://www.npaihb.org/epicenter/project/mspi\\_prevention\\_media\\_resources/](http://www.npaihb.org/epicenter/project/mspi_prevention_media_resources/)

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